Developing Flexible Command and Control of Airpower

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Over the coming decades, the Air Force can expect to be involved in missions across the full spectrum of conflict. Increasingly complex security environments will require the service to provide not only forces—ready and able to deploy quickly around the globe—but also the command and control architecture for those forces and their operations. Without the proper command and control of Air Force capabilities, the achievement of national military objectives will suffer.

Although centralized control—a guiding principle for organizing, training, and equipping Air Force command and control—sounds straightforward, it is in fact very complex and often misunderstood. The Air Force has misapplied this primary tenet by creating organizational structures with centralized command and control of airpower only at the combatant commander (CCDR) level. Although productive for major combat operations, this "one-size-fits-all" configuration runs contrary to fully effective command and control of Air Force capabilities across the spectrum of conflict.

History demonstrates that effectual command and control of airpower requires flexible control, centralized at the appropriate level of command. The current centralized practice works well for operations led at the CCDR level but limits the Air Force's ability to respond (other than through ad hoc means) to situations requiring decision authority below this level. The Air Force must adjust its

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current organizational structures to create flexible command and control options that place decision authority at the appropriate level of command in order to prepare for the complex operating environment of the future. This adjustment will better prepare the Air Force to respond to situations across the range of military operations.

Historical Context

Command and control encompasses the way the Air Force organizes, commands, plans, controls, and executes capabilities to attain a joint force commander's objectives.[1] Historically, the most basic issue of command and control involved determining the best way to organize in order to concentrate the effects of airpower. Although the decentralization of air operations for tactical applications such as artillery spotting, observation, and reconnaissance proved useful in World War I, Gen John Pershing needed concentrated air forces for the massive Saint-Mihiel offense of 1918. Gen Billy Mitchell demonstrated the vital importance of centralization when he controlled over 1,500 aircraft necessary for all of the missions—reconnaissance, interdiction bombing, and fighter defense of the battlefield—associated with that successful battle.

In the early 1940s, Army air and ground planners understood the need to concentrate air resources to fight the powerful Axis air forces. The architects of America's first North African operation understood the centralized command of air resources. However, the vast distances separating the three amphibious assaults of November 1942, coupled with rudimentary communication capabilities, created issues with span of control.[2] These concerns prompted Twelfth Air Force to temporarily split its forces into three parts for operations in Morocco, Algiers, and Oran. Consequently, several Army ground commanders inferred that those air forces were allocated to the task force commands, so they attempted to direct them. The Battle of Kasserine Pass provided unequivocal evidence to all theater leaders of the need to assure that centralized command and control resided with Airmen. The British learned the same lesson when they fought Field Marshal Erwin Rommel in the Western Desert. After Kasserine, Allied leaders centralized both American and Allied air forces into one combined force.

Centralized command and control of these forces did not imply centralization at only one level of the Allied command structure. The vast multidivisional front in France established the need for clear centralized command and control *at the appropriate organizational level*. The most famous practitioner of this concept, Gen Elwood "Pete" Quesada, commanded all tactical air forces on the continent, some more directly than others. He answered to Ninth Air Force but controlled his own IX Tactical Air Command. His other tactical air commands included the XIX Tactical Air Command of Gen Otto "Opie" Weyland, who famously supported Gen George Patton's charge across central France. Quesada trained all levels of his command for the common purpose of supporting the ground team, and he continually ensured that his wing, group, and squadron leaders understood his command intent. He also worked closely with Lt Gen Courtney Hodges, commander of Army forces in France. Quesada saw to it that Hodges's subordinate ground forces understood the relationship and philosophy of a shared mission with Airmen, and Quesada's air forces operated flexibly to match the situation. They flew constant combat air patrols—a form of penny packets—over Patton's moving forces, yet Quesada could pull groups away from other support missions to offer concentrated air forces as necessary in coordination with the supported Army command.[3]

These command and control structures were designed to balance the proper degree of centralization with decentralization, seeking to preserve flexibility at the strategic and operational levels of war yet maintain tactical flexibility as well, thus helping

to increase the tempo of operations. Additionally, the Air Force needed command and control capabilities to support simultaneous global, theater, and subtheater operations. To balance these demands and sustain unity of command, unity of effort, and the proper span of control, the Air Force built structures that placed commanders who controlled elements of Air Force capability at various organizational levels.[4]

Since Operation Desert Storm, Airmen have settled on the idea that the proper command and control of Air Force capabilities must reside only at the CCDR level. After the successful Desert Storm campaign, the concept of the theater commander, Air Force forces / joint force air component commander (COMAFFOR/JFACC) became codified in joint and service doctrine.[5] Desert Storm's theater COMAFFOR/JFACC model proved extremely effective in integrating airpower assets of other services in support of a single CCDR-led campaign. With the theater COMAFFOR/JFACC model in place and in the context of information technology's improving the ability to plan, organize, and control operations over long distances, along with personnel reductions due to budget constraints, the service continued to centralize its command and control structure at the CCDR level.[6]

Total centralization of Air Force command and control at the CCDR level formally began with the service's release of Program Action Directive (PAD) 06-09, *Implementation of the Chief of Staff of the Air Force Direction to Establish an Air Force Component Organization*, on 7 November 2006. This guidance for a redesign of the Air Force's operational command and control structure emphasized centralized control, placing centralized command and control of airpower at the CCDR level for execution by the theater COMAFFOR (normally also designated the JFACC). This concept works well for Air Force operations intended to produce operational and strategic effects.

Other situations, such as employing joint task forces (JTF) within a single theater, distributed ground operations, and tactical operations, may work better with a more flexible command and control approach. Such an approach seeks to put decision authority and planning expertise at the appropriate level of command, not to give every Army company commander his or her own air assets. PAD 06-09 stipulates that in the event one theater CCDR establishes multiple JTFs, airpower control should remain with the theater COMAFFOR/JFACC at the CCDR level. To support the JTFs, the COMAFFOR/JFACC may deploy air component coordination elements (ACCE) as liaisons to ensure proper airpower support.[7] The ACCE construct represents an effective solution for situations not requiring command decisions. However, since ACCEs are not commanders, they lack legal authority to command and control air forces. As liaisons, these elements are better defined by what they *are not* than by what they *are*. Specifically, ACCEs will not perform strategy development, guidance, apportionment, targeting, development of targeting effects, assessment, planning, production and dissemination of air tasking orders, real-time execution, or command and control of air and space operations.[8] (Since the publication of PAD 06-09, joint doctrine has renamed the term to joint air component coordination element [JACCE].)

With the implementation of PAD 06-09 and subsequent directives, the Air Force lost its command and control flexibility across the range of military operations. It built a structure in which command and control of airpower resides with the theater COMAFFOR/JFACC at the CCDR level. This model effectively plans and executes global and theater missions; however, it may enjoy less success when span of control and tactical flexibility become concerns. The Air Force is not organized, trained, or equipped to provide command and control elements to command levels below the CCDR except to a few select subunified commands, other than through ad hoc means. Doctrine, as well as current and future real-world operations, demands alternative command arrangements.

Current Operations Hint at Future Challenges

The theater COMAFFOR/JFACC model worked well in the major combat phases of Operations Enduring Freedom and Iraqi Freedom, with overall theater operations under close direction of the CCDR. However, as air operations evolved into other missions across the range of military operations, seams developed that hindered the integration of airpower into the component and supported commands. These seams arose due to the lack of Airmen with command authority at the JTF level, a less-than-full range of Air Force planning expertise below the theater COMAFFOR/JFACC level, and the absence of Air Force representation on JTF staffs.[9]

Not all future operations will resemble the current ones in Afghanistan and Iraq, but certain attributes are likely to characterize them, such as continuous, simultaneous combinations of offensive, defensive, and stability or civil-support operations conducted in a highly integrated, networked, and distributed environment under the control of a JTF. Effective operations in this environment may call for the presence of commanders empowered with decision-making authority at lower organizational levels—individuals who can provide optimal span of control, unity of command, and tactical flexibility. Although Air Force and joint doctrine describe the possibility of creating these lower-level command structures, the Air Force has chosen to organize, train, and equip itself for only one model—the theater COMAFFOR/JFACC model with JACCE support at the subtheater or staff level.

Recommendations

The Air Force must create flexible command and control structures to meet the needs of the current and future operating environment. It should prepare for the entire range of military operations by retaining centralized control of appropriate capabilities at the theater COMAFFOR/JFACC level while balancing the demands of working in an operational environment that requires decision making and planning expertise at lower organizational levels. Although the Air Force has the first piece of the puzzle—the theater COMAFFOR/JFACC model—it still needs to create capability for the rest by developing doctrine to help decide the appropriate time to deliver Air Force command and control below the CCDR level and then organize, train, and equip its forces to meet this need.

Determining When to Be Flexible

Ascertaining the organizational level for effective command and control of airpower is no simple task. It is as much an art as a science. Constant tension exists between joint force command elements during the process of determining the degree of centralized control of airpower. One must understand the appropriate time to use concepts such as the JACCE rather than another command-relationship construct or a combination of concepts. In his paper *Centralized Control and Decentralized Execution*, Col Clint Hinote identifies a practical way of identifying proper Air Force command architectures based on experiences from World War I to current operations. He poses five questions that offer direction for balancing centralization of the command and control of airpower.

What Is the Nature of the Operation?

A careful assessment of the military situation is critical when determining the appropriate degree of centralization. Different scenarios will drive different balances. For example, a campaign employing strategic attack as a line of operation will require a high degree of centralization under an air commander. The air commander must have the authority to direct operations, including attack sequencing, and shift them as operations unfold. In contrast, tactical air operations in direct support of ground commanders, such as close air support [CAS] and armed overwatch, are more effective when conducted with a high degree of decentralization. While the air command-

ers need to reserve the authority to shift assets [based upon joint force commander priorities], it is usually best for airpower to be allocated and distributed through tactical command and control nodes such as the ASOC [air support operations center] and then allow airmen to work directly with the ground commander to preserve tactical responsiveness. Furthermore, missions such as interdiction and counterair require a mix of centralization and decentralization, as centralized direction at the operational level of war is necessary to direct the overall priorities and weights of effort, but decentralized execution at the tactical level allows for a faster tempo of operations.

Where Should Flexibility Be Preserved?

A command and control structure designed to ensure flexibility at the operational and strategic levels of war almost always requires restrictions at the tactical level, and the opposite is true as well. It is important, therefore, that commanders decide the appropriate level to preserve flexibility. Nuclear operations, for example, are highly centralized—for good reason. They are designed to give the president flexibility at the strategic level, so they are highly restricted at the tactical level. Conversely, counterinsurgency operations tend to be highly decentralized, ensuring flexibility for the tactical commanders to increase legitimacy and influence within the population. Other military missions tend to fall somewhere between these two extremes. . . .

How Many Assets Are Available?

Simply stated, if plenty of assets are available, air operations can be highly decentralized with a low risk of dilution. Unfortunately, this is almost never the case, because air assets are usually limited, and their capabilities are highly desired by the joint force. Fewer assets drive the need for more centralization. . . .

What Is the Geographical Range of Effects?

Another key factor is the geographical range of airpower. Few benefits [accrue] to centralizing command and control of assets with a limited range, such as some rotary-wing and unmanned systems, as it is difficult to shift them to other missions. Once the initial allocation decision is made, it is usually best to allow these to be decentralized. A great benefit, however, exists in centralizing control over assets that can range over a theater or more. . . .

Who Has the Best Situational Awareness?

. . . The JFACC's command and control system, also called the tactical air control system (TACS), must be flexible. In certain stages and phases, the TACS must be highly centralized, with the AOC [air and space operations center] taking the lead in many activities. In other phases, especially during irregular warfare and stability operations, a highly decentralized TACS is more likely to be effective, and such subordinate elements of the TACS as the ASOC will have a large role to play. At all times, the JFACC maintains the ability to adjust operations if the strategic/operational environment changes. The art of airpower command and control is finding the right balance between centralization and decentralization in light of the specific situation.[10]

In addition to considering Colonel Hinote's questions, commanders should determine if trust has been established between joint and service commanders. If so, trust between the theater COMAFFOR/JFACC and the JTF commander will facilitate the decision to place an Air Force commander below the theater level. Creating truly joint JTF staffs will help establish trust. Additionally, these individuals should not use technological (i.e., virtual) means as the primary method for creating personal relationships. Granted, communication technology can connect theater commanders with lower joint and service organizational levels, but it is not the preferred solution for establishing trust among commanders. To quote an often-used observation, "Virtual presence is actual absence." Developing a commander's trust demands "actual presence." Teamwork and trust are best built through personal contact and shared experiences—not solely through the use of video teleconferencing. Just as personnel must understand the national culture when they conduct operations, so must they understand the culture of the services that need air, space, and cyberspace effects. The culture of the ser-

vices that Airmen work with daily—the Marine Corps and the Army—thrives on personal relationships. Technology must support the command and control of airpower but not replace the presence of commanders and planning expertise at the appropriate planning levels. Sometimes presence alone obtains the desired effect.

Finally, leaders should consider the following, additional questions as they seek to formulate command and control arrangements below the CCDR level. First, does the more pressing operational need exist at the subtheater or theater level? Second, does the need for Air Force capability require forces to operate (swing) theaterwide? Third, is the subtheater air command and control requirement an AOC and AFFOR staff element or a tailored one? Fourth, is the desired command and control even available? Finally, if the situation calls for a command and control element below the CCDR level, would operational or tactical control be more appropriate?[11]

Choosing among Options for Organizing, Training, and Equipping

If answers to all of the preceding questions lead a commander to establish an Air Force command element below the CCDR level, then the service must create a formal organizational structure within which to place the required command and control expertise. This organization should promote effective integration and synchronization of Air Force capabilities with the joint mission, including aligning forces and establishing command authority along with planning expertise at the appropriate organizational level. Joint doctrine calls for this capability, and the Air Force needs to organize, train, and equip to support that option. Expectations regarding future defense budgets suggest that the Air Force will likely find itself unable to fully staff and equip an AOC to support every JTF. With this constraint in mind, the service needs to address the challenge of organizing, training, and equipping appropriate command and control forces below the CCDR level along two tracks.

Track One: Presenting Command and Control Elements to the Subtheater Level. The first track involves either attaching these forces to the subtheater-level JTF or organizing them to support the JTF directly.[12] If the combatant commander decides to attach forces, such as an air and space expeditionary task force (AETF), to a JTF, then the AETF commander would be designated as the COMAFFOR for those assigned forces and could be designated as the JFACC (fig. 1). If the JTF already has a JACCE assigned, then the JACCE can be dual hatted as the COMAFFOR, retained as a separate position, or eliminated. The AETF can leverage distributed operations through reachback to the theater AOC and AFFOR staff. However, the tailored AETF command and control capability must provide the AETF commander who serves as the JTF COMAFFOR/JFACC enough capability to employ Air Force forces in accordance with the JTF commander's orders as well as the ability to prepare and sustain forces to carry out those orders.

Unity of command and effort for attached Air Force forces will reside at the JTF level. Command of global and theater forces not attached to the JTF but supporting it will remain at the theater COMAFFOR/JFACC level. This arrangement allows for unity of command and effort of forces that routinely swing throughout the theater and around the globe. Moreover, the CCDR has the authority to reassign forces attached to a JTF to address higher theater priorities.

Personnel currently used only on the JACCE staff can support the JTF COMAFFOR/JFACC after establishment of the task force. The personnel system must identify those individuals who have performed JACCE staff duties to facilitate their assignment to a newly established JTF or their replacement of already deployed personnel during extended operations. These members should possess the expertise to apply the full range of Air Force capabilities to support a potential JTF. Whether they perform

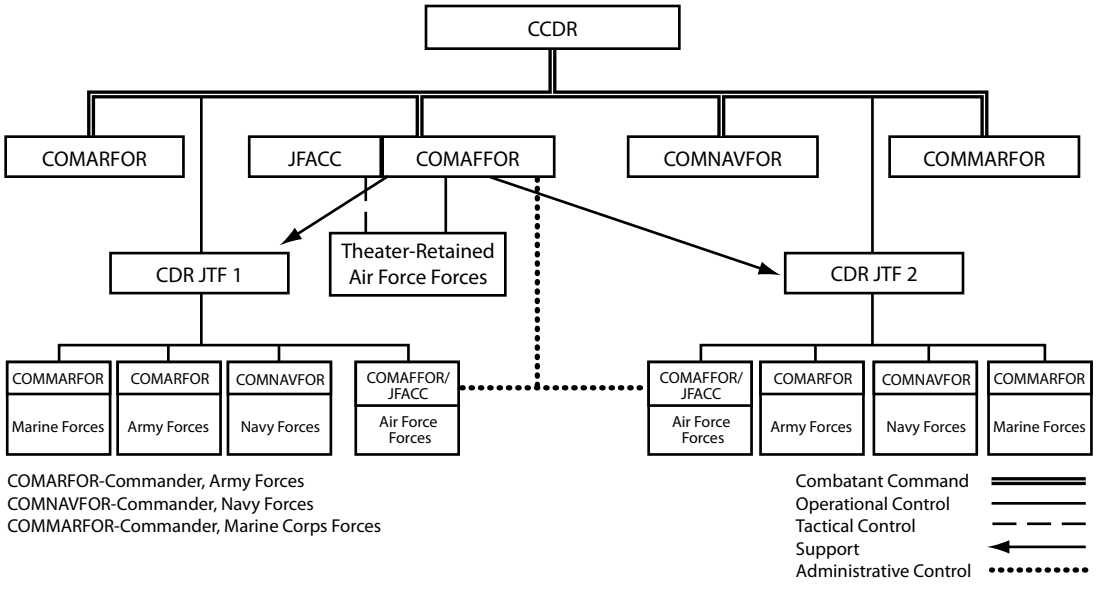

Figure 1. Air Force forces attached to a joint task force. (Adapted from diagrams developed at the Curtis E. LeMay Center for Doctrine Development and Education, Maxwell AFB, Alabama.)

strictly JACCE or JTF COMAFFOR/JFACC duties, such personnel must receive qualification and currency training for credibility and readiness upon creation of the JTF. The use of unit type codes will permit the building of subtheater JACCE/COMAFFOR modules beforehand to further expedite deployment of qualified personnel.

If, however, the CCDR decides not to attach forces to an established JTF, an appropriately sized expeditionary unit composed of all Air Force forces physically present within the JTF's joint operating area can be designated to directly support the commander (fig. 2).[13] Since the forces are essentially dedicated to the JTF commander under a single Air Force commander, this construct offers unity of effort at the JTF level. Unlike the situation when forces are attached to the JTF, the COMAFFOR retains operational control, creating unity of command at the CCDR level. This arrangement allows the COMAFFOR to retain the authority and flexibility to shift those forces in response to the CCDR's direction without first having to regain control from the JTF commander. However, this idea does necessitate creation of an organizational construct for the new intermediate expeditionary unit.[14] At present, no established Air Force echelon of command for a multiwing expeditionary unit exists below the level of the numbered Air Force. Historically, the *air division* represents the correct designation, and resurrection of this concept as a provisional unit denotation for expeditionary operations would prove quite useful. An expeditionary air division in direct support of a JTF commander would provide unity of effort at the JTF level yet retain unity of command and effort at the CCDR level.

Track Two: Subtheater-Level Planning Integration Challenges. The successful command and control of joint forces depends upon the effective integration of operational planning processes. As it has done with command authority, the Air Force has excessively centralized its planning expertise at the operational level of war.[15] Centralization of planning at the theater COMAFFOR/

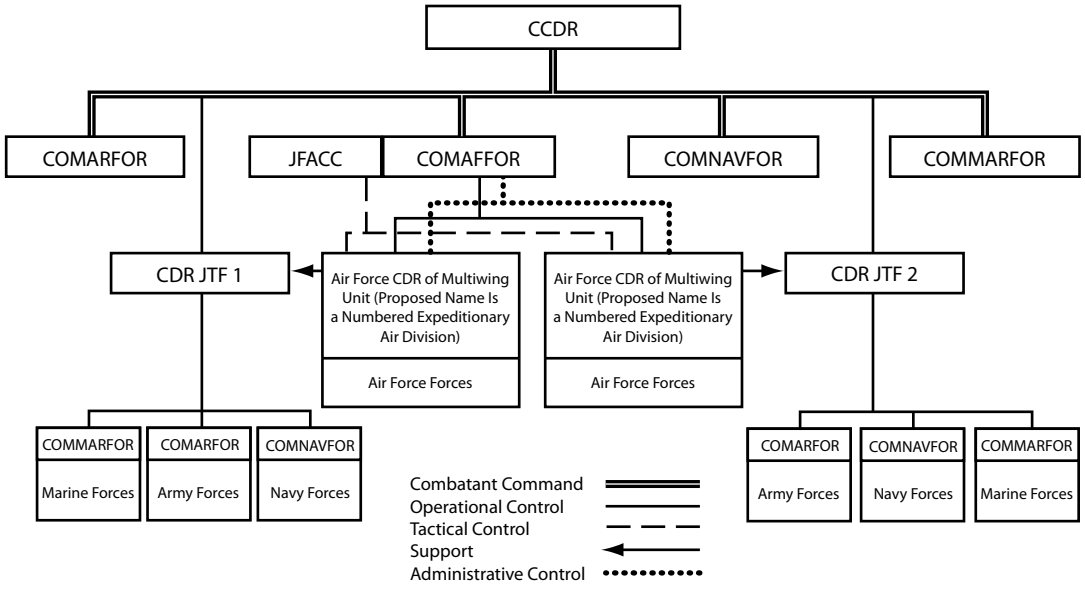

Figure 2. Air Force forces in direct support of a joint task force. (Adapted from diagrams developed at the Curtis E. LeMay Center for Doctrine Development and Education, Maxwell AFB, Alabama.)

JFACC level is fine for traditional major combat operations but less appropriate for missions in noncontiguous areas of operation in which ground units must conduct planning at the tactical level to encourage small-unit initiative.[16] Distributed planning consists of placing the correct expertise and appropriate planning tools at locations where operational plans are born and refined.

Air Force units known as tactical air control parties (TACP) align at various organizational levels with Army units to integrate CAS. These organizations provide ready structures to place a broader range of Air Force planning expertise, improving planning integration. The Air Force must permanently assign experienced planners with air planning, electronic warfare, intelligence, space, airlift, and cyber expertise to these units rather than rely on taking people from the service at large through the air and space expeditionary force process. These more robust TACPs could be supplemented with additional personnel through that process, but the core cadre should consist of permanently assigned trained professionals. This permanent structure would replace today's ad hoc TACP organization that supports the noncontiguous fights in Iraq and Afghanistan.

Although staffing these modified TACPs can prove difficult because of budget constraints, the Air Force could, for example, push planners out from AOCs. The fact that more of the planning now occurs at lower levels reduces the number of personnel needed within these centers. The Air Force should handle this available pool in two ways. First, it should designate some AOC slots for JTF JACCE/COMAFFOR/JFACC support. Individuals identified for JTF-level duties and assigned to these slots would work daily in an AOC but could move to a JTF should the need arise. Second, it could transfer the remaining slots to the modified TACPs, using them as a career-broadening opportunity for personnel assigned to the AOC.

Finally, despite tight budgets, the Air Force might consider investing in additional resources to develop command and control and planning expertise. In 2006 the Air Force faced a similar choice. The Army's reorganization and the distributed nature of irregular warfare in Iraq and Afghanistan prompted a greater need for joint terminal attack controllers. Regardless of substantial personnel cuts, the Air Force deemed the CAS mission so critical that it increased the controller career field by approximately 900 people. The service may face this same dilemma unless it can gain enough manning by pushing planners out from the AOC. To ensure the proper integration and synchronization of air, space, and cyberspace power, the Air Force may have to make distributed planning resources a priority despite restrictive budgets.

Conclusion

Command and control systems have tied together ground and air forces for nearly 100 years. Tensions between air and ground leaders have equally deep historical roots, reflected in the command element which ensures that leaders can adequately direct their forces and in the control or communications equipment that permits a workable intersection among commanders of both ground and air forces. Commanders have made countless adjustments to the command and control system over the years, and it appears that another adjustment is necessary.

The emerging environment and nature of modern military operations will become increasingly joint, coalition, distributed, complex, intense, and global. These changed conditions demand flexible command and control of airpower with appropriate decision authority at the correct level of command. In particular, Airmen are discussing how best to provide an effective subtheater command and control system. The current system relies upon the master tenet of centralized control—one that can take advantage of the unique characteristics of modern airpower, including speed, range, and multidimensional operations. The complexity of operating across the full range of military operations calls for a review of how the Air Force applies this concept today. The service must prepare to command its air resources at the global, theater, and even subtheater levels.

The Air Force is well prepared at the first two levels. Now, as the idea of subtheater command and control becomes truly viable, it must conduct an overarching study, develop a concept of operations, organize forces, train new commanders, and identify equipment necessary to control units at this lower level. ✪

Notes

1. Grasping the issues concerning command and control depends upon an understanding of the following definitions. One joint publication defines *command and control* as "the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission." Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001 (as amended through 30 September 2010), 84, http://www.dtic.mil/doctrine/new_pubs/jp1_02.pdf. Two other documents apply this definition to a joint force as follows. The authority to direct joint operations proceeds through the designation of a joint force commander (JFC), a general term applied to three levels of command: a CCDR, a subunified commander, or a joint task force (JTF) commander. A JFC exercises command and control of airpower through service commanders, functional commanders, or joint staffs. If service commanders exercise command and control, the designated commander of an Air Force service component assigned or attached to a JFC is called the commander of Air

Force forces (COMAFFOR). At the unified and subunified command levels, the COMAFFOR is the predesignated Air Force service component commander. For example, the commander of Air Forces Central is a COMAFFOR at the unified command level, and the commander of Air Forces Korea is a COMAFFOR at the subunified level. A COMAFFOR can also be established at the JTF level when Air Force forces are assigned or attached to a JTF. Importantly, COMAFFORs at the unified and subunified levels are predesignated, but at the JTF level a COMAFFOR is established only if Air Force forces are attached or assigned. If a JFC decides to use functional commanders, the COMAFFOR with his or her command and control capability should be prepared to assume responsibilities as the combined/joint force air component commander. Finally, a JFC could decide to plan, direct, and control joint air operations with the assistance of the JFC staff only. In this situation, the JFC would retain command authority and responsibility, normally requesting augmentation from appropriate components to perform the command and control air function as well as assist in planning and coordinating joint air operations. JP 3-30, *Command and Control for Joint Air Operations*, 12 January 2010, I-2–II-2, http://www.dtic.mil/doctrine/new_pubs/jp3_30.pdf; and Air Force Doctrine Document (AFDD) 2, *Operations and Organizations*, 3 April 2007, 35–42, http://www.e-publishing.af.mil/shared/media/epubs/AFDD2.pdf.

2. With regard to span of control, "The desired reach of the JFC's authority and direction over assigned or attached forces will vary depending on the mission and the JFC's ability to [command and control] the actions required. Span of control is based on many factors including the number of subordinates, number of activities, range of weapon systems, force capabilities, the size and complexity of the operational area, and the method used to control operations (centralized or decentralized)." JP 1, *Doctrine for the Armed Forces of the United States*, 2 May 2007 (incorporating change 1, 20 March 2009), IV-19, par. 14b, http://www.dtic.mil/doctrine/new_pubs/jp1.pdf.

3. Since World War II, the term *penny packets* has meant parceling out airpower to ground forces. The use of penny packets serves the individual ground commander, but it prevents air commanders from concentrating airpower to support important ground operations or to strike strategic targets.

4. "Unity of command is accomplished by establishing a joint force, assigning a mission, or objective(s) to the designated JFC, establishing command relationships, assigning and/or attaching appropriate forces to the joint force, and empowering the JFC with sufficient authority over the forces to accomplish the assigned mission." JP 1, *Doctrine for the Armed Forces of the United States*, II-3, par. 2c. Unity of effort is the "coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization—the product of successful unified action." JP 1-02, *Department of Defense Dictionary*, 489.

5. The JFACC is "the commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of assigned, attached, and/or made available for tasking air forces [*sic*]; planning and coordinating air operations; or accomplishing such operational missions as may be assigned. The joint force air component commander is given the authority necessary to accomplish missions and tasks assigned by the establishing commander." JP 1-02, *Department of Defense Dictionary*, 247. The COMAFFOR is "the senior US Air Force officer designated as commander of the US Air Force component assigned to a joint force commander (JFC) at the unified, subunified, and joint task force level. In this position, the COMAFFOR presents the single US Air Force voice to the JFC." AFDD 2, *Operations and Organizations*, 150.

6. The Air Force eliminated some of its mobile command and control capability, including airborne command, control, and communications aircraft.

7. Headquarters USAF, Program Action Directive 06-09, *Implementation of the Chief of Staff of the Air Force Direction to Establish an Air Force Component Organization*, 7 November 2006, A-4, par. 7.4.

8. Ibid., A-I-8, par. 5.8.6.2.

9. Office of Air Force Lessons Learned, *Focus Area: Air Force Innovations for the Joint Fight Role of the Air Component Coordination Element*, Lessons Learned Report (Washington, DC: Office of Air Force Lessons Learned, 22 June 2010). See also Office of Air Force Lessons Learned, *Integration of Airpower in Operational Level Planning*, Lessons Learned Report (Washington, DC: Office of Air Force Lessons Learned, 22 August 2008).

10. Lt Col Clint Hinote, *Centralized Control and Decentralized Execution: A Catchphrase in Crisis?*, Research Paper 2009-1 (Maxwell AFB, AL: Air Force Research Institute, March 2009), 59–64, http://aupress.au.af.mil/digital/pdf/paper/Hinote_centralized_control_and_decentralized_execution.pdf.

11. Doctrine Summit, Curtis E. LeMay Center for Doctrine Development and Education, Maxwell AFB, AL, October 2010, briefing slide no. 8.

12. Direct support is "a mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request

for assistance." JP 1-02, *Department of Defense Dictionary*, 138. The authors derived concepts in this discussion from multiple interviews at the Air Staff, major command, AFFOR, and component-numbered Air Force levels; the Curtis E. LeMay Center for Air Force Doctrine Development and Education; and a read-ahead paper entitled "Caging the USAF Presentation of Forces and C2 Requirements" (Doctrine Summit, October 2010).

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14. This construct is not an AETF since the latter is attached with specification of operational control to a JFC, which occurs when forces are attached to the JTF. AFDD 2, *Operations and Organization*, 43–44.

15. Office of Air Force Lessons Learned, *Integration of Airpower in Operational Level Planning*, uses that assessment as a recurring theme.

16. For discussion of planning during distributed land operations, see AFDD 2-3, *Irregular Warfare*, 1 August 2007, 66–68, http://www.e-publishing.af.mil/shared/media/epubs/AFDD3-24.pdf. See also Office of Air Force Lessons Learned, *Integration of Airpower in Operational Level Planning*, 6.

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Lieutenant Colonel Hukill (BS, Norwich University; MBA, Gonzaga University; MMIS, Auburn University) joined the Air Force Research Institute (AFRI) in March 2008 and has served as chief of the Research Division and as a military defense analyst. His principal research interests include integration of air/ground operations, force presentation, and an effects-based approach to operations. Prior to joining AFRI, he worked as a senior military defense analyst at the Curtis E. LeMay Center for Doctrine Development and Education, teaching and writing on a variety of air and space power subjects such as the air and space expeditionary force process, antiaccess strategies, and Air Force and joint command relationships. During his 22-year Air Force career, he served in operational, command, and education positions, including assignments as installation commander, chairman of the War Theory and Aerospace Power Studies Department as well as dean of Distance Learning at Air Command and Staff College, and B-52G electronic warfare officer. He is a coauthor of "Operation ANACONDA Case Study" (2003), directed by the chief of staff of the Air Force, and of the article "Anaconda: A Flawed Joint Planning Process" (*Joint Force Quarterly*, 4th quarter 2007). In addition, Lieutenant Colonel Hukill has contributed to a variety of other journals such as *Armed Forces Journal* and *Defense Analysis*.

Dr. Daniel R. Mortensen

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